

Amendments to the Drawings

The examiner requested that “white” be corrected to “write” in block 520 of Fig. 5. A corrected drawing sheet is filed herewith.

REMARKS/ARGUMENTS

After the foregoing Amendment, claims 20-25, 30-34, and 39-52 are currently pending in this application. Claims 1-15 were previously cancelled. Claims 16-19, 26-29, and 35-38 are cancelled without prejudice. Claims 39-52 have been added to more distinctly claim subject matter which the Applicant regards as the invention. No new matter has been introduced into the application by these amendments.

Allowable Subject Matter

Applicant notes with gratitude that claims 20-25 and 30-34 are allowable.

Claim Rejections

Claims 16-19, 26-29, and 35-38 are rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite, and also under 35 U.S.C. § 103(a) as being allegedly unpatentable over Tedesco (US Patent 6,421,651, hereinafter "*Tedesco*"). These claims have been cancelled without prejudice, mooted the rejections. The new claims are deemed patentable over the cited prior art for the following reasons.

The present application discloses a new way of creating unique identifiers. It is contemplated that the invention can be used to create identifiers such that each identifier will be created only once, never to be repeated by the generating system during its lifetime. Such identifiers can be useful, for example, in a computer system to identify data objects. In an exemplary implementation, a volatile memory (VM) comprising a number field and a range field is initialized by setting all of the VM to a first logical value. In addition, a non-volatile memory (NVM) is initialized by setting a bit string in the NVM to its own first logical value. For

example, if a 128kB NVM is used, a bit string in the NVM can comprise up to $128,000 \times 8 = 1,024,000$ bits, or about a million bits, all set to the same initial value. The number field in the VM is incremented until it reaches a value wherein all of the number field has a second logical value. The number field in the VM is then reset, the range field in the VM is incremented, and a next sequential bit in the NVM is stepped, i.e., changed to its second logical value. An identifier is created each time the number field is incremented or reset, the identifier comprising both the number field and the range field.

It is appreciated that when the number field in the VM finishes a cycle and the range field in the VM is incremented, the NVM bit string in the NVM is not incremented. Rather, the next bit of the bit string is simply changed to its second logical value. Thus, for example, after the number field has cycled, say, 100,000 times, the value in the range field in VM would be the binary equivalent of 100,000. The binary equivalent of 100,000 is 11000011010100000, and this binary value can be stored in the range field of the VM. In contrast, of the million bits in the bit string in NVM, there would be 100,000 consecutive bits which have been stepped, or toggled, to their second logical value. In an exemplary implementation, the bit string is initialized to all ones. In this case, after 100,000 cycles of the number field, there would be 100,000 consecutive zeroes in the bit string in NVM, with the remaining 900,000 bits still being ones. If the VM loses its contents, for example by cycling power off and on, the next identifier is generated by determining the number of stepped bits in the bit string in NVM (for example, 100,000 zeroes), storing a value based on that number of bits in the range field of the VM (for example, 11000011010100000), and resetting the number field in VM to its initial value. Identifiers are then generated by incrementing the number field, as before.

When all bits of the bit string in NVM have been stepped to their second logical value (for example, a 128kB NVM containing about a million consecutive zeroes), a counter in another NVM, or in a counter field of the same NVM, can be incremented, and the bit string reset (for example, reset to a million consecutive ones). The value of the counter can be included in the unique identifier, such as by including in the VM a counter field that is incremented at the same time the counter in NVM is incremented. If the VM loses its contents, the value of the counter field in VM can be acquired from the counter in NVM.

In addition, a predetermined identifier, such as a World Wide Name, can be stored in another NVM, or in a field of the same NVM. The predetermined identifier can also be included in the unique identifier, such as by storing it in a predetermined identifier field in the VM. If the VM loses its contents, the predetermined identifier field in VM can be acquired from the predetermined identifier stored in NVM.

In dramatic contrast to the present application, *Tedesco* teaches priority-based jukebox queuing, for songs to be played on a jukebox in accordance with their priority in a queue. *Tedesco* does not teach or remotely suggest creating a series of unique identifiers in anything like the way recited in the claims of the present application. For example, *Tedesco* does not teach incrementing a number field in a volatile memory until it contains all of its second logical value, resetting all of the number field to its first logical value, incrementing a range field, and stepping a next sequential bit in a bit string of a non-volatile memory to its second logical value, as does claim 39. Nor does *Tedesco* teach a system comprising a non-volatile memory for storing and stepping a bit string and a volatile memory coupled to the non-volatile memory having a number field and a range field, whereby a unique identifier is created comprising the number field and

the range field each time the number field is incremented or reset, as does claim 46. Therefore, claims 39 and 46 and their dependent claims are deemed allowable over *Tedesco*.

In the Office Action, the Examiner suggests for clarity using the phrase “—a predetermined identifier having a number subfield concatenated with a range subfield—”. But this is incorrect, because the number field and the range field (or number and range subfields of a so-called extension field, such as a vendor specific identifier extension (VSIE), as described in an exemplary implementation of the present application) are completely distinct from the predetermined field (such as a world wide name (WWN) in an exemplary implementation).

The Examiner states “it is not clear whether both subfields or only one subfield, and which subfield are stored in the respective non-volatile memory and volatile memory.” It should be appreciated that the number and range fields are stored only in volatile memory (VM), and neither are stored in non-volatile memory (NVM). Instead, as described above, NVM contains a bit string wherein a next sequential bit is stepped (but not incremented) at each complete cycle of the number field in VM. If the VM loses its contents, such as by being powered off/on, the value of the range field in the VM can be determined from the count of the stepped bits in the bit string in NVM (which does not lose its contents when powered off/on).

The Examiner states “Applicants’ statement [that] ‘the range and number are parts of the unique identifier, not parts of the predetermined identifier’ is not understood.” It should be appreciated that the range and number fields are not parts of a predetermined identifier, and are completely distinct from any predetermined identifier. In fact, in new independent claims 39 and 46, the number and range fields of the VM are recited, and the bit string in NVM is recited, but a predetermined identifier is not mentioned. It should further be appreciated that the number and range are dynamic, while the predetermined identifier is static and does not change.

Conclusion


In view of the foregoing amendment and remarks, Applicant respectfully submits that the present application, including claims 20-25, 30-34, and 39-52, is in condition for allowance and a notice to that effect is respectfully requested.

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

Respectfully submitted,

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